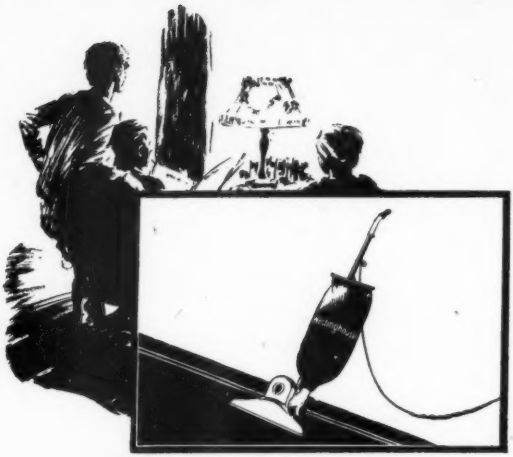
DEALER EDITION

# Electricity on the Farm

LIBRARY
RECEIVED
DEC 5 1928
U. S. Department of Agriculture

December 1928



# *Electrical helpers make your household happier . .*

It's hard to make a cheery home and be a gay companion to your family when never-ending household tasks keep you completely fagged out. Westinghouse electrical appliances bring happiness into the home by lightening the heaviest household tasks.

These electrical helpers—ranges, table cooking appliances, heaters, vacuum cleaners, irons—give you the convenience and comfort of city life. In addition, they're beautiful in appearance, built for years of constant service, and priced to fit your pocketbook.

WESTINGHOUSE ELECTRIC & MFG. COMPANY
*Offices in all principal cities — Representatives everywhere*
East Pittsburgh, Pennsylvania

*Westinghouse motors, ranges, vacuum cleaners, farm light plants—when they carry the Westinghouse trademark, you know they are good for years and years of hard service.*

# Westinghouse

# The Old Water Bucket

## Has Served It's Purpose

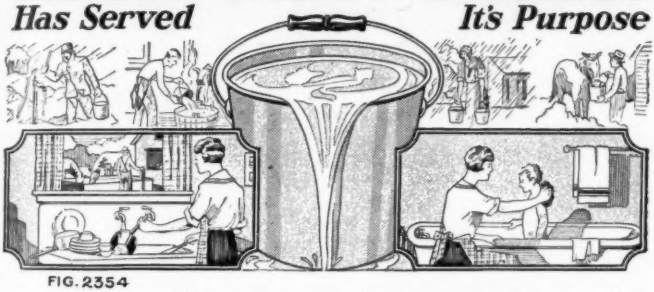


FIG. 2354

FIG. 2450

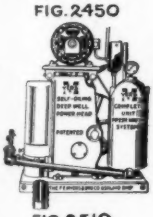
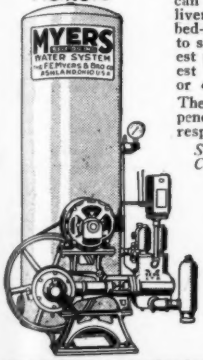


FIG. 2510




### *Once upon a time a "nice new water pail" was a fine gift for Mother!*

AMERICAN farm women appreciate "new things" for the kitchen. But the water bucket—once a very useful article—is today practically ***a symbol of servitude!*** No matter how considerate and helpful Dad and the boys mean to be, the never-ending chore of lugging heavy pails of water from place to place falls far too often on Mother's already-burdened shoulders.

The majority of farm women carry many tons of water every year—in most cases a thoroughly needless task! Because, at relatively small cost, any farm can easily have an unfailing supply of fresh, running water—all over the house—in barns and feed lots—wherever water is required for thirsty animals, fire protection, sanitation, health, comfort and well-being.

**MYERS**
**Self-Oiling Water Systems**

They bring to your farm all the comfort and convenience of city water service. They can be depended upon to deliver fresh running water at bed-rock cost and in capacities to suit the smallest place or largest farm, ranch or estate.

Made for both deep and shallow wells—for operation by hand, wind, gas engine or electric current. MYERS Electric Water Systems are self-starting, self-stopping, self-oiling. They are thoroughly trustworthy and require no attention.

Take Off Your Hat to The MYERS

The MYERS trade mark is your absolute warranty of dependable performance, highest possible quality and utmost responsibility.

*See your MYERS dealer—or write direct for catalog. Correspondence invited from Church and School Officials.*

**THE F. E. MYERS & BRO. CO.**
**364 ORANGE ST.,**
**ASHLAND, OHIO**

***Makers for over 50 years of Myers Pumps for Every Purpose, Hay Tools and Door Hangers***

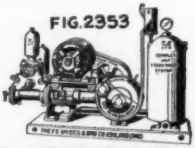


FIG. 2353

# Electricity on the Farm

Vol. 1 DECEMBER 1928 No. 18

We accept advertising only from concerns we believe to be absolutely reliable. Readers are requested to notify us promptly of any failure on the part of an advertiser to live up to the standards of service promised in these pages, whereupon we will immediately take suitable action.

## CONTENTS


| | Page |
|---|---|
| *Editorial* | 7 |
| *Lighting the Farm Home,* by W. C. Brown and M. S. Meaker | 8 |
| *What the Ohio Farm Electric Experiment Showed,* by Prof. G. W. McCuen | 12 |
| *Dairying in Texas,* by J. E. Waggoner | 16 |
| *Another Use for That Farm Motor,* by M. W. Nixon | 18 |
| *Grind Oats for Growing Pigs,* by Truman E. Hienton | 19 |
| *Electrical Housekeeping,* by Gail Meredith | 21 |
| *Hot School Lunches,* by Truman E. Hienton | 24 |
| *Cover Title Contest* | 29 |
| *When the Lights Go Out,* by J. D. Long | 34 |

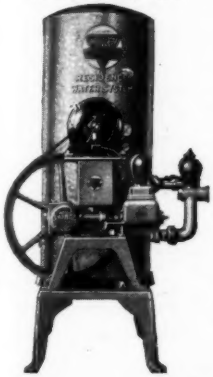

*Issued Monthly by*
CASE-SHEPPERD-MANN PUBLISHING CORP.
(Successors to Farm Light and Power Pub. Co.)
**Editorial-Executive Offices, 225 W. 34th St., New York**
*Western Office, 30 N. Michigan Ave., Chicago*
KARL M. MANN, *President* I. H. CASE, *Vice-Pres. and Gen'l Mgr.*
FRED SHEPPERD, *Editor*
H. T. MURRAY, *Western Manager* K. H. GORHAM, *Advertising Manager*
Subscription price, 75 cents per year; single copies, 10 cents

*Contents copyrighted 1928 by Case-Shepperd-Mann Pub. Corp.*

JUST LIKE CITY WATER SERVICE

# Why deny them RUNNING WATER?

**COMPLETE WATER SYSTEMS**
as low as
**$68.50**
f.o.b. Dayton, Ohio



Fresh running water under pressure will banish the drudgery of carrying water—it will bring better health, comfort and convenience to every member of the family, every day in the year. Why deny your loved ones this greatest of all farm conveniences?

Is it because you think you can't afford it? Let's be honest about it. You are losing money and the things that money can't buy without this priceless convenience on your farm. A Duro Water System is never an expense. It is a money-making investment and an investment in happiness.

It's easy to own a Duro Automatic Water System. You can buy a complete Duro Automatic Water System for a small down payment and then regular easy payments. The nearest Duro dealer or factory representative will be glad to show you what system you need for economical service and utmost satisfaction.

**THE DURO COMPANY**
**537 E. Monument Ave., Dayton, Ohio**

*Cut off and Mail*

**DURO *Automatic* WATER SYSTEMS**

THE DURO COMPANY, 537 E. Monument Ave., Dayton, Ohio

Please send me full information on Duro Water Systems, and free advisory service on my requirements.

Name..... Address.....

# Headwork is Easier With Electricity

"USE your head and rest your hands" is a maxim which has helped many a man to carry an unpromising farm to success.

With most of the trying handwork and backwork done by G-E motors and other electric equipment, the farmer has time to do the better part of his planning and constructive work before he is tired out.

Lights, running water, milkers and washing machines of themselves earn farming profits. But it is the help that electricity brings to *better management* that is the real foundation of success. The G-E monogram assures you that this help shall not fail.

***Tune in on WGY (Schenectady) KOA (Denver) KGO (Oakland) for the General Electric Weekly Farm Program.***

### *Ask Your Power Company*

If your farm is on or near an electric power line, ask the power company for a copy of the new G-E Farm Book which explains more than 100 uses for electricity on the farm.

# GENERAL ELECTRIC

95-490D

# Electricity on the Farm

Vol. 1 DECEMBER 1928 No. 18

**Christmas** To us older folks, the near approach of Christmas brings back sweet memories of years ago. How happy we were in those days when on a Christmas Eve good old Dad and Mother stuffed our stockings full of apples, candy and other things which their limited means could afford. Maybe we would get a new wagon of an inexpensive make, or a cheap tin horn. What a thrill of joy awaited us on Christmas morning. And yet, at what price! For even those simple things meant a sacrifice for dear old Dad and Mother.

Can we give reverence enough to them? We cannot.

But we can go back in spirit to the old fireside, and worship at their shrine, even though they have passed the evening and the eternal night has enshrouded them.

* * *

Let us remember that the boy and the girl of today are just the same as the lad and the lass of yesterday. The happiness we develop around the home today will bring to them, as the years roll on, the same happy recollections we now hold so dear.

Whatever we can do to brighten up the Christmas season today for the boys and girls will be returned manyfold to them in happy memories in the autumn of their lives. The happy Christmas of today makes the happy recollection of tomorrow.

* * *

And in the spirit of the season may we at this time extend to you, our readers, our sincerest wishes for a Christmas full of peace, happiness and good will.

# Lighting the Farm Home

By W. C. BROWN and M. S. MEAKER

Engineering Department, National Lamp
Works of General Electric Company

FIVE brief years ago America's millions of farms were truly in the dark. Today the power lines have been extended to nearly half a million farms, and have brought a source of light so superior to anything before available that it is raising the entire standard of living on the farm.

All this change has taken place in a very short time, and it is to be expected that many of the homes equipped with electric lighting are still left "in the dark" as to how to use the new type of illumination to their best advantage from the standpoint of economy and comfort. The purpose of this article is to give suggestions that will aid in getting the fullest posbenefit from electric lighting in the farm home.

### The Home-Making Value of Good Lighting

Given the proper attention, lighting can add immeasurably to the comfort, usefulness, and attractiveness of the home. From a dim, uninteresting room where the whole family must crowd around the lamp on the center table to read or work, electric lighting can make a real "living room" that will meet the needs of every member in the family. The hard work that a farmer's wife must do need no longer be dreary from the lack of proper light. Her long hours of work may be shortened considerably, and her evenings at home made more pleasant, by the little extra care that it takes to have the lighting "right."

But by far the most important function of lighting in the home is that of serving and protecting the eves. We realize the true need for better home lighting only when we call to mind the alarming percentage of eye defects among children. It is said that ten per cent of the children entering school are near-sighted, while about 33 per cent are near-sighted at the end of their eighth year. At birth the tendency is toward farsightedness—a heritage of ages past through which the human eye was developed out of doors. But we are indoors n w, and the child grows up with toys and books. It is our duty to see that he does not play in semi-darkness, or crouch

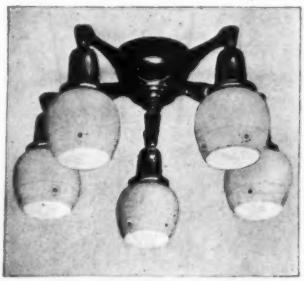


**Fig. 1. A Close-Fitting Shower Fixture, With Lamps Properly Shaded.**

over a table in unnatural positions to read by splotches of light—but rather that our rooms are lighted for health and comfort.

The new source of light must be used intelligently to achieve desirable results—or even to be comfortable to the eyes. Only last week a resident of a small town was heard to remark, "Well, I'd rather have a good old kerosene lamp to read by than the electric lighting in our living room! I pay 15c a kilowatt hour for that, and I don't think I have much then." One look into his living room explained his outb t perfectly. The house had been wired with only a ceiling outlet in each room. A 60-watt lamp hung trom a drop-cord in the center of the

room. Void of any sort of shade, it intruded its glaring, unsoftened rays of light into every corner of the room.

The home owner was right—it was not a light to read by. Dark shadows followed one's every move, and the bright light source in the line of vision was very trying to the eyes. And he was also right as to the cost, for he was not getting in a usable form the light he paid for.

Fortunately such lighting is comparatively rare. Most of us would smile at the thought of expecting comfort from such an arrangement; yet there are other mistakes subtracting from the comfort of many living rooms that at first glance we might say were well lighted.

### Lamps Without Shades

Most of the old types of ceiling fixtures were designed without shades for the lamps, and too frequently we still see unshaded shower or candle fixtures in the living room. Unshaded light is always annoying and harmful to the eyes. The ceiling fixture is very useful when a number of people are gathered in a room, as for a party, and there are on the market beautiful fixtures with shades to direct the light and shield the lamps from the eyes.

The shower fixture is hung close to the ceiling and equipped with four to six lamps. For this fixture, shades of glass, parchment, or silk are available. Shades that are somewhat smaller across the bottom than at the top, as shown on the shower fixture in Fig. 1, are desirable because they shield the lamps most effectively. With a high ceiling, the candle fixture may be used with good results. For either of these fixtures, 40-watt or 50-watt inside-frosted lamps are recommended.

Another type of ceiling fixture directs most of the light toward the ceiling, from whence it is reflected downward as soft, comfortable general illumination.

Fig. 2. Portable lamps are ready to take their place in your home—to give light that will add comfort to your rooms and be kind to your eyes.

Fig. 3. Here the living-room is lighted only by the ceiling fixture. The effect is rather cheerless and uninviting.

Fig. 4. Now we try portables alone. Their open tops give a soft glow of upward light, and they give comfortable and cheerful illumination for reading or sewing.

**Fig. 5. But for a lively evening with guests we need the light from a good ceiling fixture. And here we have the added touch of light and color from shaded wall brackets and lighted ornaments.**

There are on the market a number of ceiling fixtures embodying this principle of "indirect" lighting.

As a reaction from the old types of ceiling fixtures, with unshaded lamps, home owners turned to the portable lamp. And many of the early portable lamps were equipped with heavy dark silk shades in the effort to provide "subdued" light. Dark shades, closed at the top, absorb and waste a good portion of the light from the lamp bulb within, and send the remainder downward to form a local spot of light. Such lighting encourages uncomfortable reading positions and eyestrain. And a shade that is too thin is almost as bad as no shade at all. Too often we see the wrong qualities combined in a portable lamp.

### Choose the Living Room Portables Carefully

A portable lamp should be chosen with reference to where it will be used. A good floor lamp, equipped with two bulbs and an open-top shade, will do several lighting jobs at once. Through the open top of the shade, it will give a flood of light for its corner of the room, and the distribution of downward light may be such as to serve a chair on one side and the end of a davenport on the other side. Be sure that the shade is adjusted so that the lamps will not shine into the eyes of anyone sitting by the lamp to read. A good way to be sure on this point is to place a floor lamp at one side of the chair and slightly behind it, as is shown in the accompanying pictures from a living room.

A bridge lamp is very practical for use at the living room desk where father does his farm accounting; and the same lamp may be moved slightly to serve a comfortable chair or the sewing machine.

The distribution of light given by a table lamp is governed by its height, the location of the lamp bulbs inside, and the depth of the shade. The shade should be deep enough to conceal the light source

(*Continued on page* 31)

# What the Ohio Farm Electric Experiment Showed

From a report by
PROF. G. W. MCCUEN
Ohio State University

The Electric Washer Is Popular Among Farm Women.

JUST out of Marysville, Ohio, there runs an electric line that serves as the laboratory for the Ohio Experiments in rural electrification. The current is carried out to a group of thirteen typical farms whose owners were eager for electricity and willing to have an agricultural engineer from the University put in milking machines and feed grinders, dish washers or refrigerators, and stop in every now and then, notebook in hand, to find out how long it takes to milk the cows with the new milker, and how much current the refrigerator is using.

Before the line was built, a study was made of power used, crops, raised and general farm practices. Surveys made three, five, or ten years later will partially show the changes, social and economic, that electricity has wrought.

Then the next step was obtaining and installing equipment for the tests. After that came months of use and observation.

"I went over the line recently to observe some of the household conveniences," writes Mr. McCuen. "Nearly all of the housewives insisted that they would buy the water system first of all, if they could choose. They hadn't dreamed how many steps it would save, nor how convenient it would be until the water was actually running from the faucets in a sink in their own kitchens. The water, instead of mother, is doing the running these days."

### Pumping Water

There are shallow well pumps in the cisterns on several of these farms. Since rain water forms only a part of the water supply the amount pumped on each farm averages about 800 gallons a month. This requires about 1 K. W. H. of electric energy.

The deep well pumps work longer hours for they pump the well water to the house for sanitary purposes, and to the barn for the live stock. The current consumption for these systems varies

with the depth of the well, the size of the herd, and the equipment in the house. The average for the deep wells on this line was 1.67 K. W. H. per 1000 gallons of water pumped. The water meters showed that each person used 14.7 gallons of water a day.

The laundry work has been receiving a good share of attention.

"If we could have measured the amount of other housework done while the washer was running," writes Mrs. Black, a research student at Ohio, "Our records would show a great deal more time saved. But since this was not taken into consideration in the first survey, we could not measure it. Apparently two-thirds of an hour was saved, but this does not tell the whole story by any means."

**Washing**

5 MONTHS TEST APRIL 25–SEPTEMBER 25, 1927

| | K.W.H. per Family per Month | | Average Number in Family | Number of Families |
|---|---|---|---|---|
| | Monthly range | Average | | |
| Washing | 10–70 | 2.94 | 5.38 | 13 |

Before the coming of the electric washing machine and the ironer, these farm women were taking from 1½ to 5 1/3 hours a week to do their washing; the average time was just over three hours.

With the electric washer the time ranged from 1 1/3 to 3 hours; with an average of 2 1/3 hours a week. This meant cutting off two-thirds of an hour from the time for the job.

"There is an interesting change in the amount of washing done, too. Under the old methods these women were washing an average of 23.71 pounds of clothes each week. Since the new washers have come in, that average has jumped to 28.35 pounds a week; an increase of 4 2/3 pounds for each family. Apparently easy

**A Refrigerator Saves the Housewife Many Steps.**

washing means more washing,—and more washing means more clean clothes."

Meanwhlie the little meters on the washing machine were spinning away each month. They showed that it took 1½ K. W. H. to wash each 100 pounds of clothes or about 2/5 K. W. H. for the average washing of less than 30 pounds.

The records on the ironing showed that these women began to iron more of their clothes, and though they spent more time at the job they did the work faster with this new equipment than they had before.

"The average ironing time," says Mrs. Black, "was 2 hours, 17 minutes when the sad irons were in use; with the electric equipment this moved up to 2 hours, 41 minutes, an increase of 24 minutes a week.

"But the amount of ironing increased, too. In the original survey it averaged 14 pounds a week. Now the average jumped up to 23 pounds a week. These women were increasing their ironings by nine pounds each week, but it took them only 24 minutes more to do that increased work."

**Ironing**

5 MONTHS TEST APRIL 25–SEPTEMBER 25, 1927

| | K.W.H. per Family per Month | | Average Number in Family | Number of Families | K.W.H. per Person per Month | |
|---|---|---|---|---|---|---|
| | Monthly Range | Average | | | Variation | Average |
| Electric Ironing Machine and Electric Hand Iron | 3.0–21.0 | 8.95 | 8.0 | 4 | 0.37–2.62 | 1.12 |
| Electric Hand Iron.... | 1.0– 9.0 | 3.93 | 3.88 | 9 | 0.2 –2.25 | 1.01 |

### Current Used for Ironing

Meters on the outlets that supplied the electric irons alone showed an average current consumption of 4 K. W. H. a month. Where both the iron and ironer were used, the current consumption averaged 9 K. W. H. a month. But when the size of the families is considered this difference is not so great, being 1.01 K. W. H. a month for each person where the hand iron alone is used and 1.12 K. W. H. a month for each person when both the electric iron and hand iron were used.

The electric refrigerator is really more important in the farm home than in the town home, because the farmer has more difficulty in getting ice,—and he buys food less often and in larger quantities, than his town brother.

The housewives on the Marysville line thought the chief advantages of the refrigerators lay in the saving of steps and food. One

**Here's a Labor Saver for the Farm Woman — the Ironing Machine**

of the boxes,—the 7 cu. ft. size, used an average of 38 K. W. H. a month thruout the year. The average for the summer was 45 K. W. H., and for the winter, 30 K. W. H. In another home a 9 cu. ft. box used on average of 54 K. W. H. a month for the year, taking 72 K. W. H. a month in summer and 36 in winter.

In the Marysville district there is very little milk separated but two of the farms do run separators with electric motors. Each one uses only 8 K. W. H. a year for this purpose. This trifling expense saves many hours of cranking and the motor driven separators do a better job of separating than hand turned machines because they maintain a uniform speed.

There are twelve 5 H.P. and one 3 H.P. portable motors in use on these 13 farms. They can be readily wheeled from place to place and used for many jobs. Tho some attention has been given to ensilage cutting, they are chiefly used for feed grinding. On the 13 farms in November last year, nearly 10 tons of grain were ground and almost 8 tons of corn were shelled. Only 166 K. W. H. of current were used for power or an average of 1 K. W. H. to grind 119 pounds of grain and shell 96 pounds of corn.

"We feel that electricity can be made to pay the farmer dividends, save him time, relieve his wife of drudgery, and make his home more pleasant," says Mr. McCuen.

**Household Refrigeration**

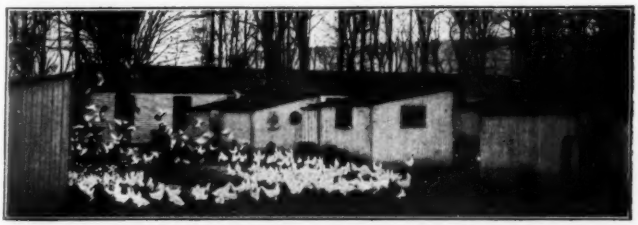
A REFRIGERATOR SAVES THE HOUSEWIFE MANY STEPS
ITS USE IS PROFITABLE TO THE FARMER

| K.W.H. per Month Yearly Average | K.W.H. per Month Apr.–Oct. | K.W.H. per Month Nov.–Mar. | K.W.H. per Month Max. Summer | K.W.H. per Month Max. Winter | Number and Size of Boxes |
|---|---|---|---|---|---|
| 37.8 | 45.5 | 30.1 | 59 | 42 | 1 (7 cu. ft.) |
| 54.0 | 71.5 | 36.3 | 85 | 67 | 1 (9 cu. ft.) |

12 Month Record January 1927–December 1927

## Masonic Home Proud of Poultry

The New York State Masonic Home near Utica, N. Y., is like a huge farm establishment. The home raises all of its own poultry and a great deal of live stock and is justifiably proud of its flock of chickens. Naturally, electric lights are used throughout the chicken houses, as well as the other buildings in the home. Here you see a small flock of White Leghorns —just a few of the great number which are raised annually. Note the pigeons in flight above the chickens.



White Leghorns at the New York Masonic Home

# Dairying in Texas

By J. E. WAGGONER
Agricultural Engineering Department, Texas A. & M. College

DAIRY farming in Texas is on the upgrade. Many factors help to bring about this growth, but I am going to limit this story to just one. That is the use of electricity on dairy farms.

The one in particular that I want to tell you about is that of Mr. W. J. Scott located near Marshall.

Maybe we ought to start with the finished product. "What is the bacteria count for Mr. Scott's milk," asked Dr. W. J. Sandidge, the health officer and milk inspector? "His milk runs well within the requirements imposed by our city—this means under the ten thousand mark."

There is plenty of sunlight in the dairy barns. The barn is washed with an abundance of water which is supplied by an electric pump. The cows are carefully cleaned and many other precautions taken but the main reason for a wonderfully clean grade of milk lies in the three pieces of equipment, all electrically driven, —the milker,—the milk cooler and the large refrigerator. The milker prevents dirt and dust from getting into the milk in the barn. As soon as a cow is milked the milk is taken to the cooler. The brine from one of the two large tanks of the refrigerator is circulated through the milk cooler by a quarter horse power motor. This cools the milk almost immediately. The milk is then bottled and put in the refrigerator where it is held until delivery time.

"Wouldn't take a million for the milker and cooler if I had to stay in the dairy business and could not get any more," said Mr. Scott. "They save a sight of help.

**"Wouldn't get anywhere without electric power," says W. J. Scott**

Wouldn't get anywhere without machinery and electric power. Can pay for them through time and labor saved."

"We never fully appreciated what electricity was doing for us until one time last summer the lightning hit a transformer and burned it out and we had to milk by hand," said Mr. Scott. "The service was off only one milking, due to the prompt action of the service department of the electric company. The women folks appreciate the electric service on the dairy farm because it shoulders a lot of the tasks that ordinarily fall to them."

"For several years I have used milkers on from 30 to 50 cows and haven't detected any ill-effects upon the cows. In fact the cows seem to be more comfortable when I use the milkers than when we hand milk. They have more liberty. If we keep the milkers properly washed and cleaned there

Pasture on an East Texas Farm

is no trouble to keep the bacterial count within legal bounds."

In a sunny climate like Texas refrigeration is a problem. Especially is this true with a food like milk that is easily contaminated. Electric refrigerators are popular because they help materially in keeping the milk sweet and ready for the market, without much attention.

### Water System Helps

Plenty of good water under pressure plays an important part in dairying in Texas. The barns must be washed after each milking if the bacteria count is to be kept down. Where an automatic electric water system is not available the tendency of the hired man is to slight the job. "I couldn't operate my plant without an automatic electric water system," said one dairyman at McKinney, Texas. "The men use four to five times as much water as they did before we installed this system, but the barn is always clean enough for a picnic any time." This dairyman circulated the water from the automatic water system through the milk cooler at milking time and in that way made it do double duty.

"Electricity makes it easier for me to get hired help," said one dairyman. "You know," he volunteered, "folks around here just don't take kindly to milking. With a milker the sweatin' is taken out of milking and I don't have no trouble getting all the help I can use."

The motor driven feed grinder is recognized nowadays as valuable equipment on both dairy and stock farms. By a system of elevated bins and the use of a ground feed elevator attachment to the grinder very little attention is necessary.

Electric Milker at Work on the Scott Farm

The W. J. Scott Dairy Barn

The grain or mixed grains run from the elevated bin directly into the feed grinder. A slide in the grain chute provides a means of regulating the flow of the grain. Even where it is necessary to carry all of the grain to the grinder and carry all of the ground feed away, one man can grind sufficient feed for a large herd in a few hours.

---

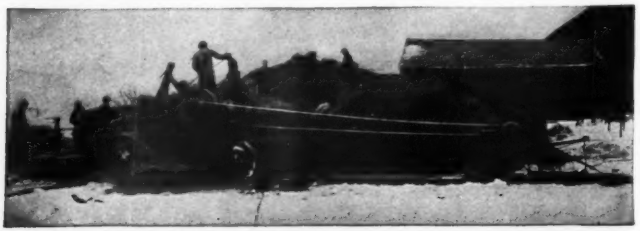
## Another Use for That Farm Motor

By M. W. NIXON

Hay baling has recently been found to be a new job for that 5 HP. Farm Motor. With its steady flow of power, it easily kept several men busy feeding the press at trials made at the N. Y. State College of Agriculture when it delivered about 40 bales per hour, averaging 114 lbs. each. The energy consumed was about 2.2 Kw. H. per ton, and the rate about 2.25 tons per hour.

Instruments employed in the test indicated an extremely intermittent load. The high peaks occurred as the rammer compressed the hay and only lasted a moment. Since the heavy flywheels on the press carried the greater part of the load over this peak, the average demand was less than 5 HP.

The 17 x 22 McCormick-Deering Hay Press was run at 600 to 650 RPM. with the standard 18 inch pulley, and a 5-½ inch pulley on the 5 HP. G. E. Farm Motor.



Hay Baler At Work—Driven by 5 Horsepower Motor.

These 10 Hogs Gained 1,107 Pounds in 100 Days on Shelled Corn, Medium-Ground Oats and Tankage at the Purdue University Experimental Livestock Farm.

# Grind Oats For Growing Pigs

By TRUMAN E. HIENTON,
Indiana Project Leader

TIME may mean nothing to a hog but it often means the difference between profit and loss to the hog feeder. For, quick maturity combined with low feed cost and a good market insure a profit to the farmer who raises hogs. The results of an extensive hog feeding experiment completed September 27, 1928, by the Animal Husbandry and Agricultural Engineering Departments of the Purdue University Agricultural Experiment Station indicate that where oats are fed in the hog ration, grinding increases the rate of gain and decreases feed cost over similar rations with whole oats.

This experiment was undertaken in an effort to secure more definite information on the preparation of oats as a feed for hogs because of their extensive use in swine rations. Grinding has long been favored as a method of preparing oats for use in pork production. The degree of fineness to which oats should be ground for most economical gains was merely a matter of opinion and had not been determined.

A ninety day feeding trial was conducted with sixty fattening-growing hogs to determine if pos-

**"It pays to grind oats when fed as a supplement to corn. The most economical fineness is through a ⅛-inch round hole screen."**

sible, the most satisfactory degree of fineness in ground oats for hogs. In this experiment the amount of pork produced and the power cost of grinding oats to different degrees of fineness were given first consideration. The pigs weighed 74 pounds at the start of the feeding trial and were fed in dry lots for ninety days. The results of the trial follow:

The ground oats used in the feeding trials were ground with a hammer grinder driven by a five horsepower electric motor. Three sizes of screen were used to obtain the three finenesses, the ¼" to secure the coarsely ground, the ⅛" to secure the medium ground, and the 1/16" for the finely ground. The figures in the following table in-

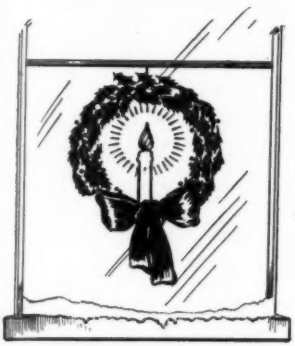
(*Continued on page 23*)

| Lot | Ration | Lbs. | 90 day wt., lbs. | Average daily gain, lbs. | Lbs. of feed for 100 lbs. gain | Feed cost of 100 lbs. gain |
|---|---|---|---|---|---|---|
| 1 | Shelled corn..... | 100 | 149 | .84 | Corn.... 403.6 | $8.72 |
| | Tankage..... | 10 | ... | .... | Tankage. 40.4 | |
| | Fed dry. | | | | Total... 444.0 | |
| 2 | Shelled corn..... | 75 | 140 | .73 | Corn.... 349.5 | 10.31 |
| | Whole oats..... | 25 | ... | .... | Oats.... 116.5 | |
| | Tankage..... | 10 | ... | .... | Tankage. 46.6 | |
| | Fed dry. | | | | Total... 512.6 | |
| 3 | Shelled corn..... | 75 | 162 | .98 | Corn.... 291.8 | 8.64 |
| | Coarse-ground oats..... | 25 | ... | .... | Oats.... 97.3 | |
| | Tankage..... | 10 | ... | .... | Tankage. 38.9 | |
| | Fed dry. | | | | Total... 428.0 | |
| 4 | Shelled corn..... | 75 | 169 | 1.06 | Corn.... 282.6 | 8.42 |
| | Medium-ground oats..... | 25 | ... | .... | Oats.... 94.2 | |
| | Tankage..... | 10 | ... | .... | Tankage. 37.7 | |
| | Fed dry. | | | | Total... 414.5 | |
| 5 | Shelled corn..... | 75 | 165 | 1.01 | Corn.... 299.2 | 8.96 |
| | Finely-ground oats..... | 25 | ... | .... | Oats.... 99.7 | |
| | Tankage..... | 10 | ... | .... | Tankage. 39.9 | |
| | Fed dry. | | | | Total... 438.8 | |
| 6 | Shelled corn..... | 75 | 169 | 1.06 | Corn.... 296.8 | 8.89 |
| | Finely-ground oats..... | 25 | ... | .... | Oats.... 98.9 | |
| | Tankage..... | 10 | ... | .... | Tankage. 39.6 | |
| | Fed wet. | | | | Total... 435.3 | |

* Prices of feeds: Corn $1.00 bu., whole oats, $2.00 cwt., coarse-ground oats, $2.02½ cwt., medium-ground oats, $2.08 cwt., fine-ground oats, $2.13 cwt., tankage, $75.00 a ton.

# Electrical Housekeeping

Conducted by GAIL MEREDITH



## The Light in the Window

OUR Christmas customs are compounded of the traditions of many lands. While modern life has swept away much of the simplicity of both belief and living through which these customs rise, we still cherish their origins to tell our children, and our children's children at Christmas time.

There are many people who affirm that our evergreen Christmas trees symbolize the tree of life, and the candles, the light of the world. But if your people came from central Europe, your grandmother can tell you a story of the very first Christmas tree that ever was.

One Christmas Eve Martin Luther was traveling alone across the snow covered country. He was so struck with the beauty of the fir trees, black against the snow, and towering toward the stars, so dazzled by the starry heavens, that he tried to tell his wife and children about it when he reached home.

They were polite, but not carried away by the beauty he described.

Suddenly he thought of a way to show them how it looked. He went out to the garden, cut off a small fir tree, and dragged it into the nursery. He put a dozen candles on its branches, and he lighted them all. The little jets of flame he called the stars.

His children loved the tree so much that it had to become a regular part of their Christmas festivities.

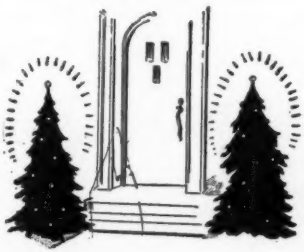
To-day we are taking the lights to the trees in our gardens as well as the one on our hearth.

Strings of lights on a long extension cord will decorate the prim little fir trees that flank our front doors, or trim a large tree before the house, or even a cut Christmas tree that must sit on its wooden block to stand gay guard on the porch itself and carry the Christmas greeting of the house to him who passes by.

One of the lovely European customs that has been revived in our part of the country since I have grown up is that of putting a light in the window on Christmas Eve.

It, like the Christmas tree lights, used to be a lovely, flickering candle. But burning candles cannot well be trusted near baby hands, and many of us have come to favor artificial candles we can hang in our windows without fear that they will blow out, or topple over, or that a passing breeze will send the flame against a tucked up curtain.

Different countries have dif-



ferent reasons for that light. Up on the Scandinavian peninsula the children left the candles burning in the window of the village all night through to give light to Kristine who brings the Christmas gifts.

Throughout northern Germany they used to have tables spread, and a light burning during the entire night so that the Virgin Mary and the angel who passed through the village when all were asleep might find something to eat.

In Austria the little children were taught to put the candles in the window so the Christ Child would not stumble as he passed through the dark streets.

---

## Merry Christmas

LAST year my neighbor across the road gave a party during the holidays. It was a pretty party because she is a clever young bride, and it was an inexpensive party because they haven't much money to spare as yet for the pleasant luxury of hospitality.

It began and ended with waffles.

The ten young people Beth had invited to meet her young brother-in-law, up from school for the holidays with them because his own family was in Florida, quite over flowed her dining room, and she set up an extra card table in the living room.

She ran one waffle iron in the dining room and her husband took

charge of the second in the living room. For with a pitcher of batter at his elbow the merest man can turn out crusty brown waffles that make him almost topple over with pride.

### In Many Styles

The party began with a waffle under creamed chicken and a mold of pretty tart jelly to give it piquancy. But after that first round it was every man for himself and according to all reports, there wasn't any hindmost. They buried these later waffles in brown sugar, trimmed them with honey, and drowned them in maple syrup. And as an accompaniment to all of them golden amber coffee poured in a reckless stream from percolators bubbling away on a serving table in the dining room.

"They were hollow clear through," said Beth proudly when she came in to return my waffle iron next day. "I thought I started out with enough batter, but I had to mix up new twice to keep us going. All the girls wanted my recipe, too."

"You used the one you got at cooking school, didn't you?" I asked.

"Yes. That's really the only one I know. But you can better believe I never breathed to any one that up till a month ago I knew nothing whatever about the home life of a waffle, to say nothing of its parlor tricks. And anyhow from now on these yummy waffles have come to our home to stay."

### The Recipe

This is the recipe Beth used. It is a standard receipt you can always depend on to go with ham and

eggs, creamed chicken or fish, or any filling combination you choose.

2 cups flour
4 teaspoons baking powder
½ teaspoon salt
1¾ cups milk
2 eggs
6 tablespoons melted shortening

It is well to remember that the quality of the waffle depends largely on the amount of shortening you use, so do not cut down on the six tablespoons of butter if you want your waffles brown and crisp.

Mix and sift the dry ingredients. Add the milk to the egg yolks, and combine with dry ingredients. Add melted shortening and fold in beaten egg whites. Pouring the batter onto the iron from a pitcher is the easiest way of handling it.

## Eating With Our Eyes

WHEN I was a little girl, if I left some of my food on my plate, my grandmother always said that my eyes were bigger than my stomach. So I began to learn very early that we do part of our eating with them.

I suppose that is why the appearance of our food is particularly important, and what keeps every housewife agog for new ways of concocting attractive dishes.

Color is one easy avenue to the family optics. That is why I like to make cinnamon apples. They are dyed bright red in the cooking and their color makes them a gay addition to any meal. They are especially good to help out color schemes for holiday menus.

I use them sometimes with the Sunday pork roast or baked chops, and now and then I use them for a salad by stuffing them with celery and dates or cabbage and raisins according to the state of my pantry —and topping them off with a dab of salad dressing.

8 small apples
2 cups hot water
2 cups sugar
¾ cup old fashioned cinnamon drops

Peel and core the apples. Make a syrup of sugar, hot water and cinnamon drops. When it is quite thick put the apples in, cover and cook with the burner on low until quite tender, turning them carefully occasionally.

Jack Frost Pudding is another holiday dish in colorful dress. I learned to make it at a cooking school this fall and I fancy it will bob up at many an afternoon party and for many a simple dinner in our neighborhood this winter. It is one of those nice desserts that you can get ready the day before and bring forth all ready to serve the last minute.

1 Tablespoon gelatine
¼ Cup cold water
1 Cup boiling water
¾ Cup sugar
Juice of two lemons
4 Egg whites

Soften the gelatine in cold water for five minutes. Add boiling water and sugar and stir until dissolved. Add lemon juice and cool. When it begins to thicken,

## Grind Oats for Growing Pigs

(*Continued from page 20*)

cate the capacity of the mill and power consumption of grains for the different finenesses. The capacity of the mill at each fineness is the average of the figures obtained in grinding for the entire experiment. The motor was operated at rated horsepower as nearly as possible.

| Screen size | Grain ground per hour | Kw.-hr. per hundred lb. |
|---|---|---|
| ¼" | 612 lb. | .766 |
| ⅛" | 192 lb. | 2.61 |
| 1/16" | 112 lb. | 4.40 |

The outstanding features of the experiment are: First, that it pays to grind oats when fed as a supplement to corn, and second, that the most economical fineness is through a ⅛-inch round hole screen.

"Why is the milk here blue?"
"Because it comes from discontented cows!"—*Mugwump.*

# Hot School Lunches

## *Are Made Possible By Electric Service*

By TRUMAN E. HIENTON

**Electric Range Used in Preparing Hot School Lunches in the Franklin Township Consolidated School, Grant County, Indiana.**

HOT lunches for the school children of Franklin township, Grant County, Indiana, are made possible because the school located at Roseburg is served by a rural electric line. An electric range, electric refrigerator and several electric cookers are used in the preparation and serving of two warm dishes each day in the school cafeteria.

Health specialists from the agricultural extension departments of state universities have been working for several years with county agricultural agents and rural school teachers attempting to provide hot lunches for rural school children.

Many obstacles have been met in the efforts of these people to provide even one warm dish each day for the rural pupils. Ordinary kerosene or gasoline stoves introduce a fire hazard into the school building, give off unhealthful fumes and create a considerable amount of extra dishwashing to keep the cooking utensils bright and clean.

The lack of storage facilities in a large percentage of schools makes a daily task of securing milk, butter, meats and other fresh food. Community schools which are often located away from towns find difficulty in securing this food regularly each day. Another problem is that of keeping food warm

**Electric Refrigerator for Storing Food to be Used in School Lunches at the Franklin Township Consolidated School, Grant County, Indiana.**

after it has been cooked until each pupil has been served.

These problems have been eliminated in this Indiana School. Miss Gladys Pence, the Home Economics teacher, prepares the food on a large electric range. There are no fumes from the fuel nor smoke and dirt to blacken the cooking utensils. The range is also used by punils doing cooking exercises in their Home Economics classes.

An electric refrigerator stores perishable food and helps to prepare the hot lunches economically by carrying surplus butter, milk or other food from one day to the next. Food after cooking is placed in electric fireless cookers and transported to the cafeteria where it is served hot to each boy or girl desiring it.

The success of the cafeteria in which the hot lunches are served shows the popularity of hot dishes for rural school children. According to Clarence Nelson, principal of the school, the cafeteria was opened in November, 1925, and receipts of $4.80 were obtained during the first week. At the present time pupils spend $75 per week for food which is served to them at very nearly the cost of the food.

### Light Checks Crime

When Chicago householders asked Morgan A. Collins, superintendent of police, what they could do toward checking the crime epidemic now afflicting their city, he replied:

"Burglars rarely enter a home where there is a light burning. Leaving your home in total darkness is an invitation to the sneak thief."

Such protection, it is estimated, would cost the average home less than $1 a year.

Serving School Lunch from Electric Cookers in the Franklin Township Consolidated School, Grant County, Indiana.

## With Our Readers

*We publish below extracts from a few of the many interesting letters we are receiving each month from our readers. We are always glad to hear from you and will as far as practical publish your comments.*

"We have only recently been connected to a line extending from the Cleveland Illuminating Co., but we have already found out what a wonderful benefit it is. You see not having electricity so very long the toil and inconveniences of the former days stand out plainly in our minds.

"I wish to say, however, that mother has not been one bit behind dad in taking up the new methods. She is even ahead of him in this respect. In the house mother has bought electrical apparatus for doing everything possible from toasting bread for my sick brother to pressing my Sunday pants, and dad has footed the bills so far without a murmur, because the washing machine, sweeper, irons, and motor for the churn eliminates the necessity of keeping a hired girl.

"My brother and I are fixing the radio up with eliminators, so when the next big fight comes we'll be sure to hear it."

RAY S. HENDRICKSON, *R. F. D. 3*
Conneaut, Ohio.

* * *

"My father owns and operates a forty acre farm three miles south of Meridian. My mother teaches the school in our home district and with the aid of her electric tools, such as washing machine, range, iron, water motor, etc., we are able to keep our home work up without hiring extra help. It is having these things that makes it possible for mother to teach.

"We call electricity 'Our Hired Girl.' We feel that electricity on the farm is the greatest boon that has ever come to the overworked farm woman."

MISS MARY BURMHAM, Route 3,
Meridian, Idaho.

* * *

"My mother and I greatly appreciate the magazine ELECTRICITY ON THE FARM, for it keeps us so well informed concerning the real service of electricity on the farm and in the home."

JEWELL LOWMAN,
Staples, Tex.

* * *

"While we have not many electrical appliances as yet, we expect to add them as we can afford them. We enjoy reading ELECTRICITY ON THE FARM and find much valuable information in them."

MRS. JAMES F. SPENCER, R. F. D. 4,
Fairmont, Minn.

* * *

"I'll tell you we sure were proud and happy when we got the electricity put in. We have an electric washing machine, an electric iron, coffee percolator, toaster and plate, electric lamps, and a milking machine. We are now getting an electrically run separator. We also have an electric sewing machine. Not one of these things could I part with. We hope to get an electric stove just as soon as we can afford it, but not any sooner than we get an electric incubator and brooder.

MRS. JOHN L. HEWITT, Box 121,
Nassau, Minn.

* * *

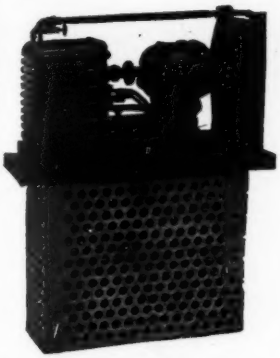
"With the battery charger we are enabled to keep our radio programs coming in clear, for if the battery is put on the line after our evening's program we are sure of good reception next evening, or at the noon hour. Batteries for the automobile are also recharged and one battery is kept up, purposely, for starting tractors that would try a man's temper, muscles and nerves some morning, otherwise."

MRS. J. L. ROSENCRANTZ, R.F.D. 2,
Stuttgart, Ark.

## YOURS UPON REQUEST

**The booklets, catalogs and descriptive leaflets listed below can be secured without cost by writing directly to the addresses given and mentioning that you saw them described in ELECTRICITY ON THE FARM.**

**Milking Machine** practice is fully covered in bulletin No. 74, to be obtained from the Myers-Sherman Co., 213 No. Desplaine St., Chicago, Ill.



## Cool Your Milk By Electricity the HAVEN WAY

The Haven Electric Farm Milk Cooling System provides iceless refrigeration for year-round milk cooling—keeps milk sweet and fresh in the hottest weather. Reduces bacteria count, improves milk quality, saves labor, space, expense. The simplest electric farm milk cooling unit ever built—***designed especially for this use.*** Anyone can install. Unit lifts out of tank. No pipes to disconnect. No belts, gears, valves, or springs to worry about. Backed by unusual guarantee.

***Price $325, f.o.b. Milwaukee, Wis.*** Tank extra, if required. Easy terms can be arranged. Write for Bulletin "B." Act now for a Haven installation.

*(A few good sales territories open for responsible dealers)*

**HAVEN MANUFACTURING CO.**
**Milwaukee - - - Wis.**

## For a Pleasant *Profitable* Winter's Grind

Install a Rowell Whip-it Hammer-Mill (electric) and grind feed for your neighbors as well as for your own needs. Make otherwise idle Winter days ***pay days.***

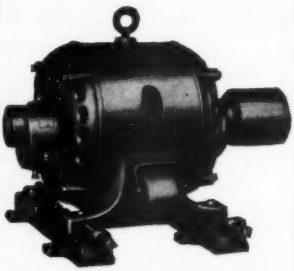
The Rowell Whip-it is a light-running, big capacity, remarkably efficient mill that literally ***pounds*** grain into feed. No steel or stone burrs to heat or wear out.

Grinds feed at lower cost per bushel than by any other type or method of grinding! Single phase 5 H.P. motor runs it. New Departure Roller Bearings. Entirely automatic. A real one-man mill. Meets every requirement of the small grinder as specified by the University of Wisconsin.

**Write for illustrated descriptive literature and prices. In replying, please mention name of Power Company which serves you.**

**The I. B. Rowell Co.**
**1316 Lincoln Ave.**
**Waukesha, Wis.**

**ROWELL HAMMER MILLS**



*7½ Horse Power Century Type SC Squirrel Cage Induction 3 and 2 Phase Motor*

**THERE IS A DIFFERENCE**

**You cannot judge a motor by looking *at* it. You must look *into* every part of it . . . . If you investigate Century Type SC Squirrel Cage Induction 3 and 2 Phase Motors, you will find a well-balanced design, durable, substantial and accurate construction, and many other points of decided difference that make them highly desirable wherever continuous, uninterrupted service is essential.**

CENTURY ELECTRIC CO.
1806 Pine St. St. Louis, Mo.
*35 Stock Points in the United States and More than 50 Outside Thereof*

Century MOTORS

**Portable Electric Clipping and Grooming Machines** are fully described in a booklet published by and available from the Gillette Clipping Machine Co., Inc., 129 W. 31st St., N. Y. C.

**"Complete Water Service, Hard-Soft-Hot-Cold-Water"** gives a detailed explanation of the Milwaukee Air Power Water System which can be secured by writing to the Milwaukee Air Power Pump Co., Milwaukee, Wis.

**Water where you want it and how to get it** is explained in a folder published by The John Lauson Mfg. Co., New Holstein, Wis.

**"The Range That 'Gets Meals' All By Itself"** is the name of an interesting folder published by the Westinghouse Elec. & Mfg. Co., East Pittsburg, Pa.

**How to Install Pipe and Operate Power Pump** is fully described in catalog HP-29 procurable from F. E. Myers & Bro. Co., Ashland, Ohio.

**Grind Feed Into Profits This Way** is an interesting folder on feed grinding which you can secure from the I. B. Rowell Co., Waukesha, Wis.

**How to Save Half Your Time** is the title of a leaflet describing the Thor Folding Ironer which can be secured from the Hurley Machine Co., 22nd St. & 54th Ave., Chicago, Ill.

**Looking Into the Future** is the name of the year book on electric incubating and brooding which will gladly be sent to you by the Wellington J. Smith Co., Cleveland, Ohio.

**Complete Pump Jack** specifications can be secured from the Acme Machine Co., 2901 Fremont Ave., S. Minneapolis, Minn.

**Milk Cooling** with simple, economical equipment is explained in Bulletin B. Write Haven Manufacturing Co., Milwaukee, Wis.

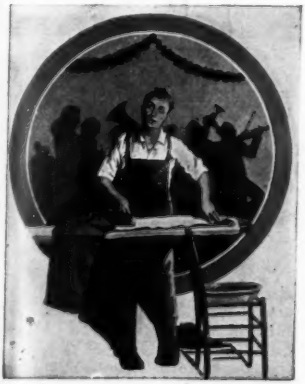
**Electric Poultry Equipment,** all types, are fully described in the catalog you can get by writing Oakes Manufacturing Co., Tipton, Ind.

## Here's the Winning Cover Title for October

"Pressing Problems Solved Electrically"
Mrs. G. H. Lindemer
Juneau, Wis.

AND these deserve special commendation:

"In time of 'pressing' need, Use electricity, a friend indeed," Mrs. C. P. Christinson, Medford, Minn.; "With up-turned eyes and pigeon toes, With sleeves rolled up he pressed his clothes," S. J. C. Sengar, Astoria, Ill.; "A pressing vision," Mrs. S. Marlatt, Port Murray, N. J.; "His hopes are high and his fancy's burning, But not his pants,—there's a safety turning!" Mrs. E. E. Ragner, Stone Ridge, N. Y.; "When engagements are pressing, Electricity is a blessing," Mrs. R. H. Silver, Blackfoot, Idaho; "Blissfull dreams and burning seams," Mrs. H. M. Bellinger, Cobleskill, N. Y.; "A pressing situation in a modern way," Mrs. O. Tofsrud, Madison, Wis.; "Pressing his *Suit*," Miss M. Long, Dayton, Va.



"Pressing Problems Solved Electrically"

For Contest Rules, see next page (page 30).


# Washes Clothes *in less than 1/3 the time*

*With General Electric Motor*

**and does *all* the work**

ACTUAL tests have demonstrated that this new Thor Agitator Washer will do your whole family washing in less than one-third the time required with a washboard. It does *all* the work. It washes clothes cleaner. And the cost of doing a generous washing is about equal to the price of 2 postage stamps.

Women on the farms — *read that again*! Can you afford to sacrifice your health and lose these precious hours for the sake of a few cents? It's false economy—and it doesn't pay.

We'll gladly send you illustrated booklets describing this, and all, Thor home laundry equipment. Write to

**THE HURLEY MACHINE CO.**
22nd Street and 54th Avenue
Dept. B Chicago, Ill.

## RUNNING WATER ON THE FARM

**BURKS**
SUPER-TURBINE
**PUMPS**
*Only one moving part*
"A Life-Time of SERVICE"

**DURABLE and RELIABLE**

The ideal pump for your AUTOMATIC WATER SYSTEM. There is only one moving part — it has no valves, leathers, gears, springs, belts, idlers, etc., to wear and cause trouble or require replacement.

There is no metal to metal contact — therefore no wear. Handles the most difficult conditions with perfect ease.

*Complete information on request.*

**Decatur Pump Company**
2756 Nelson Park Road,
Decatur, Illinois



## Put the Pump Handle in Santa Claus' hands

With the aid of electricity and a BEVAN Pumping Unit you can have plenty of fresh, running water, always on tap—without the tiresome labor of pumping.

*BEVAN* Electric Pumping Units are installed in many rural homes as soon as electricity takes over the pumping job. The *BEVAN* design and high quality of construction give rural customers many years of cheap, dependable water service. **BEVAN** roller bearings outwear a dozen plain bearings. Our patented method of using power from the motor saves half the electricity usually needed to lift water. And how quietly the BEVAN runs, year after year. It lasts!

*Write for complete details—free*

**Acme Machine Co.,**
2901 Fremont Ave., So
Minneapolis,
Minn.

THE "BEVAN"—
for wells down to 500 ft. deep


# What is Your Title for the Cover?

ELECTRICITY ON THE FARM offers a $25.00 cash prize for the best title for the picture shown on the cover of this issue (December).

### RULES OF CONTEST

1. Contest closes January 5.

2. Contestant must be a farmer or a member of his family *living on the farm.*

3. More than one title may be submitted.

4. In case of a tie, each winning contestant will receive $25.00.

5. Print plainly your name and address, and send your suggestion to Title Editor, ELECTRICITY ON THE FARM, 225 West 34th Street, New York, N. Y.

6. The winner for December will be announced in ELECTRICITY ON THE FARM for February.

Readers submitting titles must include a brief statement of what electricity is doing for him (or her), and what it can do.

## Lighting the Farm Home

(*Continued from page* 11)

from the view of one sitting in a chair beside the table, but the lamp bulbs should be so placed inside the shade as to give a good wide distribution of light for reading.

Figure 2 shows a group of portable lamps of good design. On the left is an "indirect" floor lamp. Hidden by a silk shade is a bowl which throws the light from a 100-watt or 150-watt lamp upward to give general illumination in the room. In one type of "indirect" portable lamp this bowl is designed to send a certain amount of well-diffused light downward for reading. Another type has a mirrored glass bowl that sends all of the light upward, so it is equipped with two additional lamps beneath the bowl to supply the desired downward light for reading.

Next in line in the illustration is an ordinary floor lamp; then a good bridge lamp, and a floor lamp of new design with an entirely downward distribution of light. The table lamp on the left is "indirect" as may be seen by the upward spread of light on the curtain in the background.

Next month we will give lighting suggestions for the rest of the rooms in the home.

---

### ECONOMICS

Lady—"How much are these chickens?"

Butcher—"A dollar and a half, ma'am."

Lady—"Did you raise them yourself?"

Butcher—"Yes, they were $1.25 yesterday."

---

### 50-50

"Half the County Officials Are Crooks," was the glaring headlines.

A retraction in full was demanded of the editor under penalty of arrest.

Next afternoon the headline read: "Half the County Officials Aren't Crooks."


**Oakes Electric Equipment**

**Hatch Bigger Better Chicks**

OAKES QUALITY POULTRY SUPPLIES

**Raise More Chicks Easier**

The Electric Hen hatches every good egg. Safe and economical to operate. Made in 50, 100, and 165 egg sizes. Low in price, inexpensive to operate—and oh, so simple!

HATCHING and raising chicks electrically is sure, simple, easy. Poultry and farm magazines recommend it. You will like it!

**Oakes Electric Incubators, Brooders, Water Fountain Heaters, Etc.**

Every man or woman who raises poultry for profit should be interested in the complete line of Oakes quality poultry supplies—incubators, brooders, fountains, feeders, electric egg testers, etc. Write today for complete illustrated catalog No. 77, containing valuable poultry information—free!

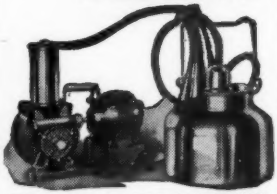
**BIG CATALOG FREE**

**OAKES MANUFACTURING CO.**

**77 Dearborn St., TIPTON, INDIANA**

**Fords Milker**

Single Unit Complete $100



**WE OFFER BIG SAVINGS**

Because of our large volume production and low cost methods of selling, we offer Fords Milker at large savings over other milkers. Thousands in use, giving great satisfaction. Used on prize herds. Finest quality construction and materials. Easy to operate and clean. Cows like it. Fully guaranteed. Read our testimonials.

**SEND for FREE booklet number 74.**

*Distributors Wanted. Fine Opportunity for merchants and farmers.*

**MYERS-SHERMAN COMPANY**
213 N. Desplaines St., Chicago, Ill.

SMITH BROTHERS
**Electric BROODER**

For the sixth successive year the *marvel* of the brooding world. Owners claim it to be "the world's best brooder."

**Raises 5% to 20% More Chicks**

Exclusive patented features. Saves time. Saves labor. Ends fire risks. Clean, economical. Automatic heat control. Gives long, satisfactory service. Get yours NOW at local hatchery, hardware store, or from us.

**Select your Brooder from this list**

| | |
|---|---|
| 18 in. | 75 chick size, $9.50 |
| 24 in. | 100 chick size, 12.00 |
| 32 in. | 200 chick size, 16.00 |
| 42 in. | 350 chick size, 20.00 |
| 56 in. | 600 chick size, 24.00 |
| 72 in. | 1000 chick size, 36.00 |

**USE THIS COUPON:**

WELLINGTON J. SMITH CO., 600-A
Davis-Farley Bldg., Cleveland, Ohio.

☐ Enclosed is $.... for .... (quantity) ..... (size) Smith Brothers Electric Brooder.

☐ Send Free Folder.

Name .....

Address .....

## Care of Electric Motors on the Farm

By Harry N. Gilbert

Most of the machines which farmers have had to use in the past were not injured by liberal applications of oil and grease even if it was not confined to the bearings or other parts requiring lubrication. They are now using a type of machinery, electric motors, which should have a little different care.

Electric motors will operate better and last longer if kept clean and free from oil. When there is oil all over the motor it will soon be covered with a layer of oil soaked dirt. This gets in the brush holders and in a short time the brushes stick in the holders so that they do not make good contact. This will cause sparking. It also gets all over the commutator which also causes sparking and pitting of the commutator.

The oil also gets into the windings and after a time will spoil the insulation on the wires causing trouble and expense.

Motors made with oil-ring bearings have an overflow. When oiling them, the oil should be poured in slowly until it is nearly high enough to run out the overflow. If poured in too fast, the oil cannot get out of the overflow opening fast enough so it runs into the motor and gets all over the brushes, brushholders and commutator. A few minutes spent in keeping an electric motor clean will pay big dividends.

Electric motors should be protected from rain. Water will soak into the windings causing trouble and expense if allowed to continue for any length of time. Rain will also get into the oil wells, floating out the oil and leaving the

**CLASSIFIED ADVERTISING**

BARGAINS—Electric Motors & Repairs; We sell, buy, repair, rebuild, rent, exchange, any type, make, or size in the line of electric motors. Send us your inquiry. We handle both new or used motors, everyone guaranteed or money refunded. J. V. Wallace Co., Inc., 33 Barrett St., Schenectady, N. Y.

*A Wonderful Gift for the Family*

**REDECORATE**

with new lighting equipment that will show your good taste and fit your pocketbook.

**Modern Lighting**

will give you *years* of pleasure and utility

**Our *New* 1929 Designs**

are built to give permanent beauty and satisfaction at a *reasonable* price. Send a layout of the rooms where you need better light and we will submit *free* suggestions with our latest catalog. No charge for this service. Address, "Rural Homes Dept.,"

**Chapman Lighting Studios**
**640 West Lake St., Chicago, Ill.**

Catalog No. 3300 C

motor to run on rain water which is not a very good lubricant. A farm motor so treated recently cost the owner $20 for new bearings and parts for the short circuiting device in the commutator. For a quarter of this amount a rain proof cover could have been built and the trouble and expense avoided.

Motors installed in barns or other places where chaff, dust, etc., can sift down on them thru cracks in the floor should be protected in some manner so that the chaff and dust does not get into the motor. If the motor is of the open type it can be protected by putting a roof of sheet iron over it. No open type motor however should be completely boxed in so there is no chance for air circulation thru and around it if it is to be run for more than a half hour at a time as it is liable to get too hot.

Motors for farm use would be easier to keep clean and would last longer if the top half of the bearing brackets were completely enclosed with a cover furnished by the manufacturer.

When bearings become worn so that the shaft can be moved up and down in them they should be replaced before serious injury is done to the rotating part of the motor. If motors are not run with a very tight belt the bearings will last much longer. It is not good practice to set up a motor where it must operate with a vertical belt as the belt tends to hang away from the lower pulley making it necessary to use a very tight belt which is bad for bearings.

The LAUSON

**Electric PumpJack**

will convert your ordinary pump into a water supply unit, controllable all weather by a button in the house, that will unfailingly deliver all the water you want—deep or shallow well, if works equally well.

**Built Like a High Grade Auto Transmission**

Machine cut hardened gears, fully enclosed, running in oil. Bronze bearings. No chains or sprockets. High grade motor. Compare with all others. Write for special literature and prices.

***Also complete Water Systems***

**THE JOHN LAUSON MFG. CO.**
**700 Michigan St., New Holstein, Wis.**

**GILLETTE**

**Portable Electric Clipping and Grooming Machines**

The convenience of the Gillette Portable Electric Clipping and Grooming Machines appeals to every progressive stockman, farmer, and stable owner. Attached to an ordinary lamp socket, it is instantly ready for work. No mechanical experience required to install or operate them.

**Price list on request**

**Gillette Clipping Machine Co., Inc.**
**129 West 31st Street, Dept. 11,**
**New York City**

## When the Lights Go Out

BY J. D. LONG

Of course the new electric system on the farm is going to work. We are not expecting trouble as soon as we begin to light our premises and lighten our tasks electrically. But just the same, it is well to remember that no man-made systems are infallible and to understand the electric system well enough to detect symptoms of trouble, recognize the possible causes and know something of what to do.

Even the most modern lights will, on occasion, fail; and the following suggestions may save the householder both trouble and money:

If one lamp fails, the filament may be burned out or broken. Try a sound lamp. If it does not light, the trouble is in the socket or wiring and expert assistance will be needed.

If several lights go out together, a fuse has burned out, and a new fuse should be put in. If this blows, the circuit is defective. It is wise to attach a list to the fuse box showing which rooms each fuse controls. Fuses are safety valves. Never use coins, wires or other material as substitutes, and always open the main switch before replacing a fuse.

If all the house lights go out, but those in the barn continue to function, the main house fuse has blown and should be replaced. If this again blows, there is a defective or overloaded circuit and you should call expert help.

If all the lights on the farmstead go out and you find that those of your "up-the-line" neighbor are in order, the trouble is either in the line leading in from the transformer, in the transformer itself, or in the line between it and the one belonging to your neighbor. Report to the power station.

If the whole neighborhood goes dark, the trouble is in the main line or in the power house itself. Notify the company immediately.


**Pump Your Water by Electricity**

**Only $58.00**

**Here is the little direct connected gear driven suction plant which has been brought out to meet the demands for a low priced, high class water system. There is no belt to slip and thus lower the efficiency of the system. It is a neat, compact little unit; has a delivering capacity of about 300 gallons per hour and only costs $58.00. In producing a system at this low price we have not sacrificed quality for cheapness.**

**We manufacture other sizes and styles of suction plants, deep well working heads, water softeners, septic tanks, drinking cups for stock, etc. Prices on water equipment, $58.00 and up. Write us about your requirements and for literature, without obligation.**

**MILWAUKEE AIR POWER PUMP CO.**
**6 Keefe Ave., Milwaukee, Wis.**